

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of)
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	Kazuo Fujiura et al.)
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Serial No.:	10/599,452) Art Unit
) unknown
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Confirmation No.:	9165)
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For:	AN OPTICAL MEDIUM, AN OPTICAL LENS)
	AND A PRISM)

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. § 1.97

Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Sir:

Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). While no representation is made that these references may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed listed references are disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the enclosed art is the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each of the listed references or relevant portion thereof that is not a US patent document is also enclosed.

Statement of Relevance of References Listed
Unaccompanied by English Translation
Under 37 CFR § 1.98(a)(3)

In accordance with 37 CFR § 1.98(a)(3), the following concise explanation of the relevance of each listed reference that is not in the English language and unaccompanied by a translation into English is provided.

Japanese Publication No. 07-082087: PURPOSE: To control the growing shape of a perovskite-type oxide single crystal for elements such as optical wavelength conversion element and to improve the processing yield of the element. CONSTITUTION: A perovskite-type oxide single crystal having a general formula ABO_3 (A is Li, K or Na and B is Nb or Ta or A is Ba and B is Ti) is produced by TSSG process by growing the crystal in a specific direction, pulling up the most part of the grown crystal until the crystal is brought into contact with the hot solution at a part of the bottom of the crystal, and continuing the growth of new crystal from the contacting part of the crystal and the solution.

Japanese Publication No. 2000-019301: PROBLEM TO BE SOLVED: To provide an optical recording device equipped with a focusing lens which has variable refractive indexes, high and low, and excellent transmittance, which can be easily produced, which significantly improves the recording density and which is effective to reduce the cost. SOLUTION: The focusing lens 5 consists of a single crystal of one of $SrNbO_3$, $SrTaO_3$, $CaNbO_3$, $CaTaO_3$, $CaTiO_3$, $KNbO_3$, $KTaO_3$, $BaZrO_3$, $SrZrO_3$, $CaZrO_3$, $KNbO_3$, $KTaO_3$, $K(Ta,Nb)O_3$, $BaZrO_3$, $SrZrO_3$, $CaZrO_3$, $ZnWO_4$, $ZnMoO_4$, $CdWO_4$, $CdMoO_4$, $PbWO_4$, $Bi_{20}SiO_{12}$, $Bi_{20}GeO_{12}$, $Bi_4Si_3O_{12}$, $Bi_4Ge_3O_{12}$, GaP, ZnTe, ZnSe, Cu_3TaSe_4 and ZnS.

Japanese Publication No. 2002-296632: PROBLEM TO BE SOLVED: To achieve high-efficiency and low-noise wavelength conversion without poling of a crystal and allow switching and modulating by an electric field of a converted light. SOLUTION: A KLTN crystal 4 is a plate having a thickness of 0.5 mm that both sides are optically polished, has electrodes that gold is deposited and provided in an entrance plane, and is connected from the electrodes to a DC power supply by using copper wires. The crystal material is the crystal having a composition of $KTa_{1-x}Nb_xO_3$ and/or $K_{1-y}Li_yTa_{1-x}Nb_xO_3$. A fundamental wave generated by a fundamental wave generating apparatus 1 uses a light of $1.55\ \mu m$ which is a differential frequency between a Q switch laser of Nd: YAG and an excimer laser, controls a polarized wave in a parallel direction to the electric field by using a polarizer 2, and enters between the electrodes of the KLTN crystal 4. The KLTN crystal 4 rotates a direction of the electric field on an axis. A part of a generated SHG light having the same polarized direction as that of an incident light enters into a photomultiplier 8 through a polarizer 7.

Japanese Publication No. 2003-123302: PROBLEM TO BE SOLVED: To provide an optical pickup in which a condensing spot with which a recording medium is irradiated is contracted and which pickup is compatible with a high recording density and a large capacity of the optical recording medium and to provide an optical recording and reproducing device which is provided with the optical pickup and performs an optical recording and reproducing with a

high recording density. SOLUTION: In the optical pickup which is composed of at least a light source and a condenser lens 13 which converges the emitted light from the light source and forms a light spot, light having a wavelength in the range of 390 to 450 nm is emitted from the light source and the condenser lens 13 is composed of one or more optical lenses 11 and 12 including the optical lens 11 which is composed of strontium titanate or consisting essentially of strontium titanate and the absorption coefficient of which lens for the light emitted from the light source is 2.0 cm^{-1} or smaller. Further, The optical recording and reproducing device which records and reproduces on a recording medium 30 is composed of the optical pickup.

Japanese Publication No. 2003-167187: PROBLEM TO BE SOLVED: To provide an objective lens for recording/reproducing information of an optical information recording medium, a lens that is lightweight and can be mass produced inexpensively, that is composed of two positive lens group with a numerical aperture larger than 0.85, that is suitable for an optical pickup apparatus having a light source wavelength of 500 nm or below and well-compensated in chromatic aberration, with an operating distance greatly secured, and also to provide an optical pickup apparatus as well as a recording and/or reproducing apparatus.

SOLUTION: The objective lens for recording and/or reproducing information of an optical information recording medium comprises a first lens group having a positive refractive power and a second lens group having a passive refractive power arranged in this order from a light source side of the objective lens. The first and second lens groups are made of a plastic material respectively, and the following formula is satisfied: $NA > 0.85$ (where NA is an image side predetermined numerical aperture necessary for recording or reproducing information of the optical information recording medium).

Article entitled *Trends of Large-Capacity Optical Disk*: in the advanced information age, even to lead an everyday life, a large amount of data must be handled. In the past, most of the data, especially in the computer-peripheral arena, are stored in hard disk drives. With the advent of DVD, promising potential of optical disk drives has been widely recognized, and many innovative technologies to increase the recording density have been proposed. In this paper, some of these trends are introduced.

Dated this 20th day of February 2007.

Respectfully submitted,

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